



SUBSTITUTE SPECIFICATION  
APPLICATION NO. 10/761,293  
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### THREE-DIMENSIONAL STRUCTURE FORMING METHOD

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This application claims a benefit of priority  
5 based on Japanese Patent Application No. 2003-014050,  
filed on January 22, 2003, which is hereby incorporated  
by reference herein in its entirety as if fully set  
forth herein.

#### 10 BACKGROUND OF THE INVENTION

The present invention relates, generally, to a  
three-dimensional structure forming method, and more  
particularly, to a method for forming a three-  
15 dimensional structure on a thick, photosensitive resin.

Recent demand for smaller and lower-profile  
electronic devices has increasingly required finer  
semiconductor devices to be mounted onto these  
electronic devices, and a critical dimension has become  
20 smaller than 0.15  $\mu\text{m}$ . For this requirement, various  
proposals have been made to improve resolving power of  
a projection exposure apparatus.

The resolution improves effectively with increased  
numerical aperture ("NA") of the projection optical  
25 system or higher NA and a shortened wavelength of an  
exposure light source. Therefore, exposure light  
sources have recently been in transition from the KrF